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(54) Title: TECHNETIUM-AND RHENIUM-BIS(HETEROARYL) COMPLEXES, AND METHODS OF USE THEREOF

(57) Abstract: One aspect of the invention relates to complexes of technetium (Tc) and rhenium (Re) with various heteroaromatic ligands, e.g., quinolinyl and isoquinolinyl ligands, and their use in fluorescence and radioimaging for a variety of clinical diagnostic applications, as well as radiopharmaceuticals for therapeutic applications. Another aspect of the invention relates to quinolinyl and isoquinolinyl ligands that form a portion of the aforementioned complexes. Methods for the preparation of the technetium and rhenium complexes are also described. Another aspect of the invention relates to quinolinyl and isoquinolinyl ligands based on derivatized lysine, alanine and bis-amino acids for conjugation to small peptides by solid phase synthetic methods. Additionally, the invention relates to methods for imaging regions of a mammal using the complexes of the invention.